

## ***NOAA In Your Territory***

# **Guam**

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***“NOAA’s science based work touches 300 million Americans daily, protecting lives and livelihoods. NOAA’s products and services are the result of the hard work of our dedicated staff and partner organizations located in program and research offices throughout the globe. The following is a summary of NOAA programs based in, and focused on, your state or territory. The entries are listed by statewide, region, and then by congressional districts and cities or towns.”***

**Dr. Kathryn Sullivan**

**Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator**

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### ***Guam***

#### ***Entire Territory***

#### **National Marine Fisheries Service (NMFS) - [Pacific Islands Fisheries Science Center](#)**

NMFS is responsible for the management, conservation, and protection of living marine resources within the U.S. Exclusive Economic Zone. The Pacific Islands Region includes the waters surrounding American Samoa, Guam, Hawaii, and the Commonwealth of the Northern Mariana Islands as well as the Pacific Remote Island Areas. It is the largest geographic area within NMFS jurisdiction, with a U.S. Exclusive Economic Zone of more than 1.7 million square nautical miles of ocean. Using the tools provided by the *Magnuson-Stevens Fishery Conservation and Management Act*, NMFS monitors and assesses fish stocks, promotes sustainable fisheries, develops and ensures compliance with fisheries regulations, restores and protects habitats, and works to reduce wasteful fishing practices. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS regulates and conducts research supporting the recovery of protected marine species (e.g., sea turtles, whales, and dolphins). NMFS also co-manages four marine national monuments in the Pacific Islands Region: Rose Atoll Marine National Monument, Marianas Trench Marine National Monument, Pacific Remote Islands Marine National Monument, and Papahānaumokuākea Marine National Monument. Regional Office staff in the Guam field office review local Army Corps of Engineer permit applications and conduct extensive fieldwork to support project reviews. The staff provide local expertise and valuable information on habitat and protected resources to local governments and agencies. The office coordinates activities of the NMFS Coral Program and works closely with local coral reef program points of contact to fund projects in the area. Both the Regional Office and Science Center have offices in Hawaii and field offices serving American Samoa and the Northern Mariana Islands in addition to Guam.

**National Ocean Service (NOS) - [Coastal Management Program](#)**

Through a unique Federal-state partnership, NOAA's Office for Coastal Management works with the Guam Bureau of Statistics and Plans' Coastal Management Program to implement the National Coastal Zone Management Program in Guam. NOAA's Office for Coastal Management provides the Guam coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure our coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

**National Ocean Service (NOS) - [Coastal Storms Program](#)**

The Coastal Storms Program will focus resources on the Pacific Islands from FY10-15 to increase the resilience of coastal communities. CSP is providing new products and services that improve weather forecasts, address sea level and storm surge impacts, provide risk and vulnerability assessments, and translate the information to remote communities through training. A local outreach coordinator is located at the University of Hawai'i Sea Grant Program and is working with the NOAA Pacific Services Center and Pacific Risk Management 'Ohana (PRiMO) to expand impacts. CSP supported a small grants program in FY12 totaling \$1M with 8 projects selected that are focused throughout Hawaii and the US Territories.

**National Weather Service (NWS) - Automated Surface Observing Systems [Stations](#)**

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There is one ASOS station in Guam.

**National Weather Service (NWS) - NOAA Weather Radio All Hazards [Transmitter](#)**

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There is one NWR transmitter in Guam.

**Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Global Air Sampling Network](#)**

NOAA's Earth System Research Laboratory (ESRL) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to the ESRL laboratory, located in Boulder, CO. The observed geographical patterns and small but persistent spatial gradients are used to better understand the processes, both natural and human induced, that underlie the trends. These measurements help determine the magnitude of carbon sources and sinks.

**Office of Oceanic and Atmospheric Research (OAR) - [Sea Grant College Program](#)**

NOAA's National Sea Grant College Program is a federal-university partnership that integrates research, education and outreach. Sea Grant forms a network of 33 programs in all U.S. coastal and Great Lakes states, Puerto Rico and Guam. Sea Grant has an extension agent in place working for a Sea Grant position at the University of Guam. Sea Grant has an extension agent in place working at the University of Guam. A Sea Grant presence on Guam represents an opportunity for the National Sea Grant Program to support and advance the establishment of a Sea Grant presence in Micronesia that is devoted to providing science-based information, translation, and coordinated research and extension activities that focus on managing coastal and ocean resources in ways that balance human need with environmental health. University of Guam Sea Grant works in partnership with numerous stakeholders to promote sustainable business and tourism practices, sustainable fisheries, watershed restoration that can positively affect our coastal community. In addition, Sea Grant strives to better understand the social derivations that define current issues. Outreach and education programs at University of Guam Sea Grant uniquely engage the community by integrating valuable social and cultural tenants of the Chamorro community. Research is targeted at developing technology for the early-detection of marine invasive species and understanding the physiological consequences of pollution entering marine environments.

**Office of Oceanic and Atmospheric Research (OAR) - [NOAA Center for Tsunami Research](#)**

The Tsunami Research Program at the Pacific Marine Environmental Laboratory (PMEL), headquartered in Seattle, Washington, seeks to mitigate tsunami hazards to all U.S. coastal states and territories. The PMEL NCTR staff conducts research and development activities in close collaboration with the National Weather Service (NWS) Tsunami Warning Centers, National Data Buoy Center (NDBC), and the coastal states. DART (Deep-Ocean Assessment and Reporting of Tsunamis) buoys are moored off the United States coastlines to help measure a tsunami wave in order to provide accurate information on tsunami wave height and arrival time to the Tsunami Warning Centers.

**[Coastal](#)****National Ocean Service (NOS) - [Navigation Manager](#)**

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Guam. They help identify the navigational challenges facing marine transportation in Guam and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a navigation manager in Seattle, Washington to support mariners and stakeholders in the Pacific Islands region.

**National Ocean Service (NOS) - [Marine Debris Projects and Partnerships](#)**

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP is currently expanding their partnership and involvement in this territory.

**National Ocean Service (NOS) - [Pacific Islands Environmental Response Management Application](#)**

Assessing important spatial information and designing successful restoration projects rely upon interpreting and mapping geographic information, including the location, duration, and impacts from oil spills, other hazardous materials, or debris released into the environment. Pacific Islands ERMA® is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index (ESI) maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. Pacific Islands ERMA covers the Hawaiian Islands and outlying territories. It is primarily focused on impacts from coastal storms and marine debris, including data for the 2011 Japanese earthquake and tsunami response.

**National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System Program](#)**

U.S. IOOS® is an operational system and a network of regional partners responsible for regional observations, data management, modeling and analysis, education and outreach, and research and development. The overarching purpose of U.S. IOOS is to address regional and national needs for ocean data and information. IOOS regional partners provide coordination with regional stakeholders while contributing data and other outputs to the national system – supporting regional priorities while advancing national objectives. The Pacific Islands Ocean Observing System (PacIOOS) is one of these Regional Associations, creating an effective partnership of data providers and users working together to develop, disseminate, evaluate and apply new ocean data and information products designed specifically to address the needs of the communities, businesses and resources that call the Pacific home. The PacIOOS region is defined as the state of Hawaii, the Commonwealth and Territories of the United States in the Pacific and the Freely Associated States in the Pacific.

**[Agana](#)**

**National Ocean Service (NOS) - [Coral Reef Conservation Program](#)**

NOAA's Coral Reef Conservation Program brings together multidisciplinary expertise from over 30 NOAA offices and partners. The goal is to protect, conserve and restore coral reef resources. In response to identified threats and management priorities developed by coral reef managers in Guam, NOAA invests in implementing conservation action plans to reduce pollutant loadings to coastal watersheds, monitoring and research of coral reef fisheries, and implementing Guam's natural resources strategy, which has a focus on Apra Harbor. Additionally, NOAA directly supports coral research and watershed restoration efforts in Manell-Geus, a NOAA habitat blueprint focus area. Examples of projects include: conducting benthic cover trend analyses and assessments to provide baseline data for Department of Defense activities, coordinating community monitoring in Guam's marine preserves, and stabilizing streambanks to reduce sedimentation and flooding within the Achang Reef Flat Marine Preserve and Cocos Lagoon.

**[Anderson Air Force Base](#)**

**National Environmental Satellite, Data, and Information Service (NESDIS) - [Office of Satellite Data Processing and Distribution](#)**

Anderson Air Force Base is home to the 36th Wing of the Pacific Air Forces (PACAF). The mission of the 36th Wing is to employ, deploy, integrate and enable air and space forces from the most forward US sovereign Air Force Base in the Pacific. Anderson AFB is also home to two NOAA Search and Rescue Satellite Aided Tracking (SARSAT) antenna and associated ground equipment. These ground systems, referred to as Local User Terminals (LUTs) can receive signals, relayed through polar orbiting satellites, from ships, aircraft or individuals in distress. The location of the distress signal is automatically forwarded to the SARSAT Mission Control Center, which notifies the appropriate Rescue Coordination Center. SARSAT is part of an international humanitarian effort helping to improve the rescue of person's in distress and has saved more than 6,000 lives in the United States since 1982.

**[Apra Harbor](#)**

**National Ocean Service (NOS) - [National Water Level Observation Network](#)**

The National Ocean Service (NOS) operates one long-term continuously operating tide station in Guam that provides data and information on tidal datum and relative mean sea level trends, and is capable of producing real-time data for storm surge and tsunami warning. This station is located in Apra Harbor. This station is critical to commercial shipping and U.S. Naval interests and the U.S. Military, NWS West Coast and Alaska Tsunami Warning Centers, commercial shipping, and the general population on Guam. The station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels and helps connect the water level to land.

### *Merizo*

#### **National Marine Fisheries Service (NMFS), National Ocean Service (NOS) - [Manell-Geus Watershed Habitat Focus Area](#)**

The Manell-Geus Watershed has been selected as a Habitat Focus Area under NOAA's Habitat Blueprint. Habitat Focus Areas are a non-regulatory, collaborative approach to habitat conservation that NOAA launched in 2013 to increase the effectiveness of NOAA's habitat conservation science and management efforts. Habitat Focus Areas are places where NOAA offices, working together with public and private sector partners, can achieve measurable habitat conservation results in three to five years. The Manell-Geus Watershed contains extensive seagrass beds and coral reefs that support the area's strong fishing tradition, and provide important forage and resting habitat for sea turtles. Unfortunately, erosion and sedimentation caused by a variety of land-based activities are negatively impacting coral reef health. NOAA is working with partners and the local community to reduce sedimentation to encourage resilient reefs and terrestrial habitats that will sustain the people of Merizo into the future.

### *Mongmong Toto-Maite*

#### **National Marine Fisheries Service (NMFS) - [Office of Law Enforcement](#)**

NOAA's Office of Law Enforcement is the only U.S. conservation enforcement agency that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws, international treaties, and regulations dedicated to protecting wildlife, and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement actions if there are violations. In addition, the Cooperative Enforcement Program gives OLE the ability to leverage its resources with the assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in supporting its Federal enforcement mission. Effective fisheries law enforcement is critical to creating a level playing field for U.S. fishermen and enabling sustainable fisheries to support all the communities throughout the Pacific Islands. The Guam field office, located in Mongmong Toto-Maite, is part of the Office of Law Enforcement's Pacific Islands Division which is headquartered in Honolulu, Hawaii.

### *Pago Bay*

#### **National Ocean Service (NOS) - [Water Level Sensor](#)**

The National Ocean Service (NOS) operates a tide station in Pago Bay that provides data and information on tidal datum and relative mean sea level trends, and is capable of producing real-time data for storm surge and tsunami warning. This station is located at the University of Guam campus. This station is operated in partnership with the National Weather Service (NWS) Tsunami Program. This station is critical to NWS National and Pacific Tsunami Warning Centers. The station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels and helps connect the water level to land.

### *Tiyan*

#### **National Weather Service (NWS) - [Weather Forecast Office](#)**

Located near the International Airport in Guam, this NWS Weather Forecast Office (WFO) has public, aviation and marine forecast and warning responsibility for Guam and the Commonwealth of the Northern Mariana Islands and the surrounding ocean areas. In addition, WFO Guam has international responsibilities for aviation advisories and forecasts for the tropical Pacific from 130E to 160E; public tropical cyclone watch, warnings and advisory products for the tropical islands of the northwest Pacific; and forecast support for weather service programs involving the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau under the Compact Agreement of Free Association treaties.

Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards. Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Joplin and Moore tornadoes, Hurricanes Katrina and Sandy, and the Sept. 11, 2001, terrorist attacks in New York City and Washington D.C. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs, which helps build strong working relationships with local partners in emergency management, government, the media and academic communities. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions. The radar data enables forecasters to issue warnings for tornadoes, severe thunderstorms, and flash floods.

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**NOAA** NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION  
UNITED STATES DEPARTMENT OF COMMERCE

